

# TOWARDS GREEN PATHWAY- CHIANG MAI MUNICIPALITY



## Policy Brief

This document presents the policy brief and policy statement for the promotion of Non-Motorized transport in Chiang Mai Municipality, Thailand.

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# TOWARDS GREEN PATHWAY- CHIANG MAI MUNICIPALITY

## ABOUT THIS POLICY BRIEF

A Greenhouse Gas (GHG) inventory study conducted by Chiang Mai Municipality (CMM) on tourism related activities showed that the transportation sector contributes to significant emissions. Stakeholders of the tourism sector related activities then identified Non-Motorized Transport (NMT) in CMM as one option that can not only reduce emissions from transport, but also promote income generating opportunities for the poor.

This booklet presents the policy brief and policy statement for the promotion of Non-Motorized transport in Chiang Mai Municipality, Thailand. The proposed policy brief and statement was approved by Lord Mayor Tassanai Buranupakorn of Chiang Mai Municipality, Thailand.

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## OTHER RELATED POLICY BRIEFS

Preservation of garden houses for sustainable urban tourism in Hue city, Viet Nam

Promotion of Non-Motorized transport in the Greater Mekong Sub-region

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### **SUMERNET-CDKN RESEARCH PROJECT**

#### **Sustainable urban tourism through low carbon initiatives: Experiences from Hue and Chiang Mai**

The policy brief presented in this booklet is based on the research conducted for developing sustainable urban tourism through low carbon initiatives in Hue (Viet Nam) and in Chiang Mai (Thailand). This research aimed to explore strategies for reducing carbon emissions while simultaneously alleviating poverty in the urban tourism sector of these cities.

The tourism service providers were estimated to emit about 0.5 million tons of CO<sub>2</sub> equivalent in Hue city and about 0.44 million tons of CO<sub>2</sub> equivalent in Chiang Mai in the year 2011. The recommended mitigation option to reduce GHG emission and to create clean and decent jobs to the local people included NMT in Chiang Mai, and promotion of 'Garden Houses for tourism' in Hue city.

# Towards green pathway- Chiang Mai Municipality

## POLICY BRIEF

The policy brief presents the background and issue related to the promotion of Non-Motorized Transport (NMT), and discusses how Chiang Mai Municipality (CMM) can promote low carbon tourism through the introduction of NMT in the city.

### 1. UNDERSTANDING THE PROBLEM

Traditionally, NMT was one of the major modal shares in developing countries. For example, in Beijing and Delhi, walking and cycling together contribute to about 53% and 33% of the modal share respectively<sup>1</sup>. However, with increasing motorization and decreasing inclination to use non-motorized methods, interest in designing measures and incentives for non-motorized traffic is given increased attention in small and medium cities<sup>2</sup>.

NMT is mostly used for short-distance trips, with cycling particularly relevant up to 7.5 kms, and walking up to 2.5 kms. As up to 70% of cars trips cover less than 5 kms, NMT has a large potential to replace car travel<sup>3</sup>. Facilitating NMT, particularly walking and cycling, will directly lead to the reduction of the Carbon-dioxide (CO<sub>2</sub>) emissions. Cycling and walking are also access modes for public transport, and thus their promotion could lead to increased public transport use. Promotion of NMT also delivers important co-benefits, such as noise and pollution reduction, better health, and a greener environment.

## 2. NON-MOTORIZED TRANSPORT FOR CHIANG MAI MUNICIPALITY

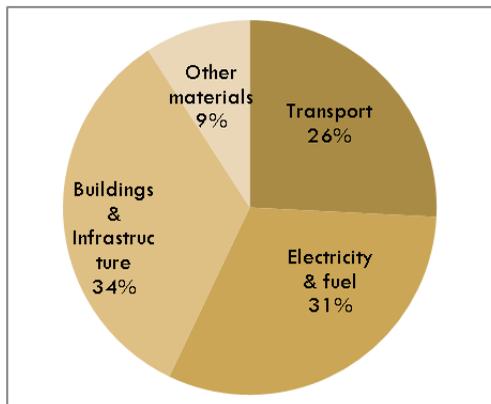
Cities being important contributors of GHG emissions have an excellent opportunity to show case emission reduction potential and reap important co-benefits. Small/medium scale cities like Chiang Mai could introduce NMT through the introduction of appropriate policies, and tread towards a lower carbon development path. Preliminary estimates of GHG inventory by the tourism sector in CMM showed that transportation was the major source of GHG emissions, equivalent to more than 4.2 million tons of CO<sub>2</sub> in 2011<sup>4</sup>. Developing NMT area in the city center of CMM will offset around 230 to 570 tons of equivalent CO<sub>2</sub> per year in CMM. NMT areas will not only help CMM to reduce its carbon emissions, but also provide wider economic and health benefits.

CMM being one of the growing tourist destinations in Thailand, designating NMT in crucial touristic locations will not only enhance recreational opportunities by reducing congestion, but also reduce emissions and benefit the local community. The restricted motorized transport will provide opportunities for the tourists and others to purchase handicrafts and other goods from local vendors, thereby contributing to the local economy. It helps in the additional income generating opportunities for the tricycle drivers, bicycle shops, etc is. Noise and dust pollution will also be minimized.

## 3. EXPERIENCE FROM OTHER CITIES

NMT such as bicycles play a crucial role in the mobility of people in developed countries, especially in Europe (Netherlands and Denmark). The number of inhabitants per bicycle is about 1.0 to 1.3 in these countries. The Dutch NMT policy dates back to 1990s when the Dutch Bicycle Master plan was formulated as one of the elements of the 'Structured Scheme for Traffic and Transport'. The Safe Bicycle Riding Promotion Plan (2007) of Tokyo Metropolitan Government in Japan was formulated to improve and promote bicycle usage<sup>2</sup>.

The Republic of South Africa has developed its draft national NMT policy mainly to increase the role of NMT, and to provide the necessary infrastructure and resources for its promotion and development<sup>5</sup>. NMT improvements in U.S communities reduced approximately 0.40 to 1.20 km of daily driving per adult, i.e. 1% to 4% of total automobile travel<sup>6</sup>. The Australian Travel-Smart program, which uses various incentives to encourage residents to use alternative modes typically, reduces automobile trips by 5% to 14%, about half resulting from shifts to non-motorized travel<sup>7</sup>. Similarly, the pedestrianization of Malioboro Road in Yogyakarta of Indonesia in 2005 cut the traffic in the area by about 30%<sup>2</sup>.



CO<sub>2</sub> emission of major tourism sub-sectors in Chiang Mai Municipality\*

## 4. POLICY RECOMMENDATIONS FOR PROMOTING NON-MOTORIZED TRANSPORT IN CHIANG MAI MUNICIPALITY

Prioritizing options for NMT will help CMM in not only ensuring sustainable urban transport but also in gaining social equity and improving its touristic potential. The following recommendations<sup>8,9,10</sup> are therefore suggested for

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\* This does not include visitors from other cities (within the country and abroad (international travel)

ensuring sustainable urban tourism through NMT.

- Detailed traffic modeling exercise prior to implementation will help in the identification of appropriate boundaries, traffic displacement issues and potential areas that would benefit from mitigation measures.
- NMT should be developed within the framework of total cost accounting including all external costs and considerations for the poor.
- CMM should incorporate NMT components in its transport master plan and be in line with the broader national and provincial transport policy with clearly set targets.
- Prioritize transport infrastructure investments to NMT, including aspects such as safety concerns of the pedestrians and non-motorized vehicle owners, construction of segregated lanes, parking of non-motorized vehicles, control on the activities of street vendors and ensuring smooth flow of NMT traffic, wherever feasible.

### Existing Policy Landscape for Non-Motorized Transport

- The current policy sets aside 4% of the total area in CMM for NMT, and this might be increased to 10%.
- The Cabinet approved a policy at provincial level on Sustainable Green Areas 2007 to stimulate development of urban green spaces through private sector participation, local capacity building and improvements in laws, regulations and instructions<sup>8</sup>.
- Sectoral policies at national level such as, transport and environment and broader socio-economic development strategies such as National Economic and Social Development plans, all emphasize the development of low carbon and green city by increasing green area and energy efficiency.
- NMT is also one of the transport modes supported for mitigation of climate change under the climate change initiatives.

The objectives of the municipal/provincial NMT policy/strategy plan may include <sup>2</sup>:

- Integrated land use planning for NMT within state/regional transport and land use planning;
- Integrate NMT in other modes of urban transport;
- Promote NMT as an additional mode of urban transport;
- Prioritization of areas of NMT which provide facilities with international standard;
- Development of road safety programs; and
- Development of by-laws regarding non-motorized transport.

### Non-Motorized Transport- Three Kings Square of Chiang Mai Municipality

- The emission per visitor per day was around 3 kg of CO<sub>2</sub> equivalent during 2011 within the city.
- Promoting NMT in the three kings square area and Chiang Mai Moat (close to the center of old city) covering an area up to approx. 6,000 meters square will offset around 230 to 570 tons of CO<sub>2</sub> equivalent to 13,300 tree seedlings grown for 10 years.
- Around 23% of Thai tourists walk or cycle and almost 93% of international tourists in around the Chiang Mai Moat area according to a survey.
- Majority of the street vendors, traditional convenience stores, bicycle shops, tricycle providers agree that NMT will lead to increased economic activity and hence create additional income.

## POLICY STATEMENT

### POLICY STATEMENT APPROVAL BY LORD MAYOR, CHIANG-MAI MUNICIPALITY, THAILAND



**Lord Mayor Tassani Buranupakorn**



Chiang Mai Municipality  
Thailand

#### **Purpose**

CMM is providing this policy statement to reflect its support for the development and extension of NMT system in this municipality area. A sustainable urban transport system with a focus on NMT will be crucial for Chiang Mai to maintain the livability of its communities and to enhance its attractiveness at major tourist destinations. CMM encourages project developers, concerned authorities, agencies and the communities to proactively engage in the development and implementation of this NMT system. This policy (plan) intends to lay a strategy and plan to initiate a course of developing non-motorized transport, such as walking, bicycling and tri-cycle with initial focus on Three Kings Monument center and connecting to the moat of Chiang Mai's inner city.

#### **Policy Statement**

CMM will consult and co-ordinate with relevant government departments and concerned stakeholders in developing an institutional and policy framework, and implementing strategies for a NMT system.

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## Partner Institutes/Organizations

### SUMERNET

The Sustainable Mekong Research Network (**SUMERNET**) works to support a long-term research network that informs and influences policy development on sustainable development issues in the Mekong region.

### Climate and Development Knowledge Network (CDKN)

The Climate and Development Knowledge Network (CDKN) is a 5 year (2010-2015) programme funded by the UK Government Department for International Development (DFID) to support developing countries in Africa, Asia, Latin America and the Caribbean.

### Sweden's Regional Development Cooperation

The objectives of Sweden's Regional Development Cooperation with Asia focusing on Southeast Asia are greater respect for human rights, more sustainable use of natural resources and planning for communal services for people living in poverty and increased regional integration.

### Asian Institute of Technology, Thailand

The Asian Institute of Technology promotes technological change and sustainable development in the Asian-Pacific region through higher education, research and outreach. Established in 1959, AIT has become a leading regional postgraduate institution and is actively working with public and private sector partners throughout the region and with some of the top universities in the world.

### Chiang Mai Municipality

The Chiang Mai Municipality (**CMM**) established since 1932 covers an area of approximately 40.216 km<sup>2</sup>. The city has seen its economy grow driven by the commercial sector and tourism industry.

### Center for International Cooperation (HCIC)

**HCIC** is a state agency under the authority of Hue city People's Committee that manages the political, cultural, social and economic fields of Hue city.



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